

REMARKS

1. Applicant would like to express his appreciation for the interview granted to Applicant's undersigned attorney on June 6, 2007. In response to the discussion between the undersigned attorney and Examiner Soohoo, the independent claims have been revised to incorporate limitations to clarify the invention in the following manner:

Claim 1 has been revised to change from a Jepson format to a combination format in which the storage bins for aggregate, cement and water were added and that the aggregate is carried to the mixing auger by a conveyor where the cement paste is added directly to the aggregates in the mixing auger to create a concrete mixture. The turbine mixer is operable to pre-mix the cement and water for discharge directly into the mixing auger for combination with the aggregate conveyed thereto.

Claim 10 has been further amended to clarify the spaced relationship between the agitating fins disposed outwardly from the mixing plate into the annular gap and the outer shell of the mixing chamber.

Claim 33 is further amended to define the mixing plate as carrying first and second agitating fins on opposite sides thereof to cooperate with stationary pegs mounted in the inner and outer chamber, respectively, with the agitating fins terminating in spaced relationship to the mixing chamber to maintain a portion of the annular gap between the agitating fins and the mixing chamber.

Claim 40 is also further amended to define that the turbine mixer pre-mixes the cement and water to be added directly to the mixing auger where aggregates have been transported by an aggregates conveyor. The mixing plate is defined as carrying first and second agitating fins on opposing sides thereof to be cooperable with stationary pegs supported by the mixing chamber.

Claim 46 was not further amended as Examiner Soohoo had indicated the claim contained allowable subject matter during the interview.

2. The Office Action had rejected Claims 33 – 38 and 46 - 48 under the provisions of 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 4,691,867 (Iwako). This rejection is respectfully traversed by the above claim amendments.

Applicant respectfully submits that amended independent Claim 33 is directed to a turbine apparatus for pre-mixing cement and water for use in an apparatus for making concrete, in which the pre-mixed cement and water have been atomized into a highly hydrated cement slurry that

is subsequently added to aggregate to create the concrete mixture. Claim 33 further defines the turbine mixer as having first and second agitating fins located on opposite sides of the mixing plate to cooperate with stationary pegs mounted in the inner and outer chamber of the mixing chamber with the agitating fins terminating in spaced relationship to the mixing chamber so as to maintain a portion of the annular space between the agitator fins and the mixing chamber. Amended independent Claim 46 has been deemed to contain allowable subject matter.

The structural limitations defined in Claim 33 cannot be met by the Iwako reference as there is no teaching for agitating fins being mounted on both sides of the mixing plate to be cooperable with stationary fins to achieve a mixing action on the cement and water in both chambers on opposite sides of the mixing plate. Furthermore, Iwako has scraper blades that rotate with the multiple mixing plates to scrape material away from the inner wall of the mixing chamber.

Accordingly, Applicant respectfully requests that this rejection be reconsidered and withdrawn.

3. The Office Action had rejected Claims 1 – 3, 5 – 7, 9, 10, 12 – 14, 40 – 42, 44, 45 and 49 – 52 under the provisions of 35 U. S. C. §103(a) as being unpatentable over Iwako in view of U. S. Patent No. 4,406,548 (Haws) and U. S. Patent No. 4,439,042 (Bertogilo). This rejection is respectfully traversed.

Applicant respectfully submits that the state of the known art in the production of concrete contains no teaching or suggestion for the high speed pre-mixing of dry cement and water to create a cement slurry that accelerates the hydration process before the cement slurry is added to aggregates in a conventional mixing apparatus to create a concrete mixture. Applicant's turbine mixer creates a premixed atomized slurry that affects a hydration of the individual cement particles in a manner that has heretofore been unknown in the art. This intense hydration of the cement particles causes a rapid cure of the concrete mix that is created after the premixed cement slurry is added to aggregates to produce concrete. The rapid and intense hydration of the cement particles is evidenced through tests that show a significant increase in temperature on the outer surface of the turbine mixer.

Haws contains the general teachings for a volumetric concrete production machine in which quantities of aggregate, cement and water are carried in hoppers to the job site. The individual components of aggregate (usually separate hoppers of sand and stone) are dispensed from their hoppers onto a conveyor that also collects on top of the aggregate a supply of dry cement that is carried to the hopper of a mixing auger where water is added to the dry components and mixed

together to create a concrete mixture. Haws contains no teaching or suggestion whatsoever that the cement and water can be pre-mixed into a cement slurry that can be added after pre-mixing to aggregate conveyed into the mixing auger. Applicant respectfully submits that neither Iwako nor Bertogilo contain any teaching or suggestion for the pre-mixing of cement and water into an atomized hydrated cement slurry for use in the production of concrete.

As noted above, independent Claim 1 has been amended to define a concrete production apparatus in which the supply of cement is conveyed into a turbine mixer to be pre-mixed with water to create a cement paste that is then added directly into the mixing auger to be combined with aggregates being transported there from the supply bins independently by a conveyor. As noted above, none of the cited prior art references, whether taken singly or in combination, teach or suggest such a concrete production apparatus.

Claim 10 has been amended to defined structural limitations that cannot be met by any of the cited prior art references. More particularly, the mixing plate carries agitating fins that are disposed outwardly from the mixing plate into the annular gap between the mixing plate and the shell of the mixing chamber, yet terminate in spaced relationship with the shell so that at least a portion of the annular gap is maintained between the agitating fins and the shell. As noted above, Iwako does not have agitating fins that are disposed outwardly from the multiple mixing plates disclosed in this prior art references. Iwako does have scraper blades 7 that turn along the inner wall of the mixing chamber; however, the scraper blades in Iwako do not provide the agitating action that the mixing pins 26 provide and neither the Iwako mixing pins nor the Iwako scraper blades can meet the specific limitations set forth in amended independent Claim 10.

Claim 40 also defines a mobile concrete production apparatus including the improvement of a turbine mixer that is operable to pre-mix supplies of cement and water to create a cement slurry that is added directly to a mixing auger to be combined with a supply of aggregate that is transported into the mixing auger by an aggregates conveyor. Claim 40 also defines that the turbine mixer includes a mixing plate having first and second agitating pins on opposing sides of the mixing plate to be cooperable with stationary pegs supported by the mixing chamber to provide a mixing action in both the first and second chambers before being discharged out of the turbine mixer directly into the mixing auger.

For the reasons given above, Applicant respectfully submits that the cited prior art, whether taken singly or in combination, cannot meet the invention as defined in these amended

independent claims. Accordingly, Applicant respectfully requests that this rejection be reconsidered and withdrawn.

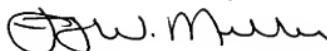
4. The Office Action has rejected Claims 8, 16, 39, 43 and 53 under the provisions of 35 U. S. C. §103(a) as being unpatentable over Iwako in view of Haws and Bertogilo and further in view of U. S. Patent No. 4,822,482 (Hollingsworth). This rejection is respectfully traversed.

Applicant respectfully submits that Hollingsworth adds nothing to the teachings of Iwako, Haws and Bertogilo to meet the specific limitations of amended independent Claims 1, 10, 33, 40 and 46 as described above. Accordingly, Applicant respectfully requests that this rejection be reconsidered and withdrawn.

5. In summary, Claims 1, 7, 10, 33 and 40 have been amended and Claims 1 – 3, 5 – 10, 12 – 14, 16, and 33 – 53 remain in the application. Applicant believes that the claims are allowable based on the foregoing amendments. Applicant respectfully requests that all rejections and objections be reconsidered and withdrawn and that all claims remaining in this case be allowed.

Pursuant to currently recommended Patent Office practice, the Examiner is expressly authorized to call the undersigned attorney if in his judgment disposition of this application could be expedited or if he considers the case ready for final disposition by other than allowance.

Respectfully submitted,



Date: June 7, 2007

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